Appendix

Transit Sustainability Project

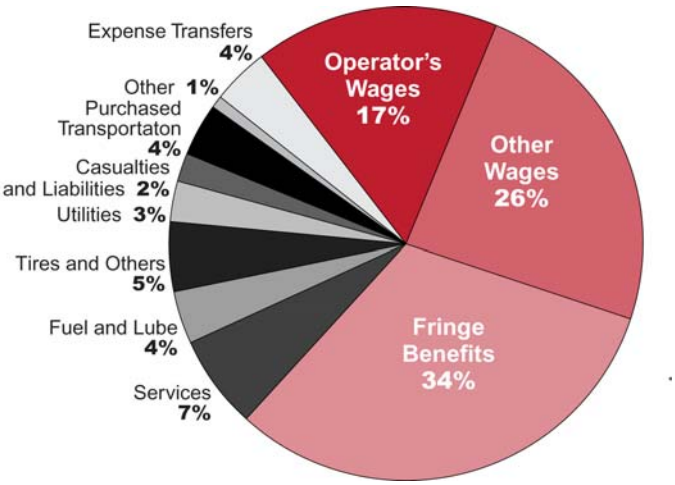
Background and Findings

Financial
Background and Findings

Background:
The Transportation 2035 Plan's cost and revenue projections demonstrate that the Bay Area's transit system simply is not sustainable. Focusing on the seven largest transit agencies, which account for roughly 93 percent of the region's transit operating costs, the TSP financial analysis shows that the real operating costs (independent of inflation) of the "Big 7" increased significantly faster from 1997 through 2008 than did service levels or ridership. Even adjusted for inflation, the disparity remains, and is especially pronounced for bus and light rail operators, with relatively better trends for heavy rail and commuter rail operations. The transit agencies have since identified and implemented strategies that begin to address financial sustainability.

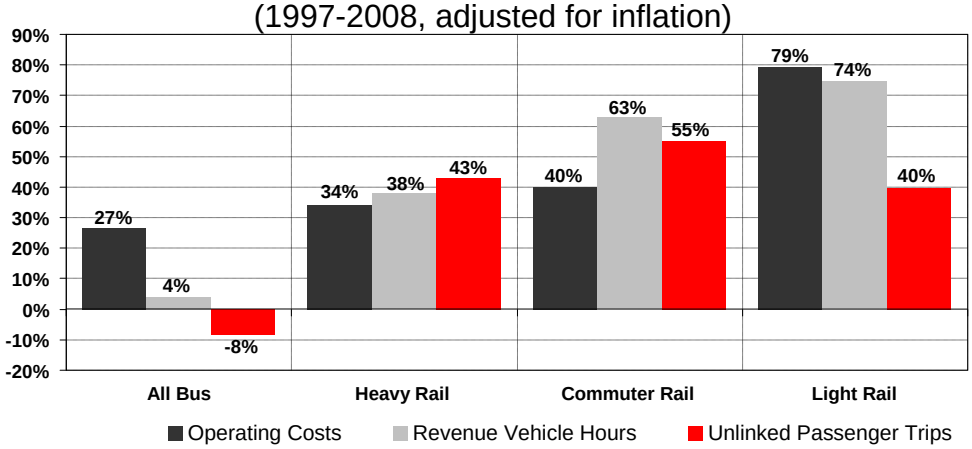
The TSP financial analysis aimed to clearly identify the transit agencies' specific cost drivers — both internal and external — and to understand the relative impact of cost reforms. By far the biggest cost drivers are wages and benefits, which together account for 77 percent of the $2.1 billion (2008 dollars) in annual operating costs for the region's transit system. Cost distribution and changes in cost and performance indicators for the Big 7 operators are shown below.

2008 Operating Costs – "Big 7" Operators Nearly $2 billion



Source: National Transit Database, "Big 7" only. Includes ferry, cable car and paratransit.

Major Modes: Aggregate Percent Change in Cost & Performance Indicators
(1997-2008, adjusted for inflation)



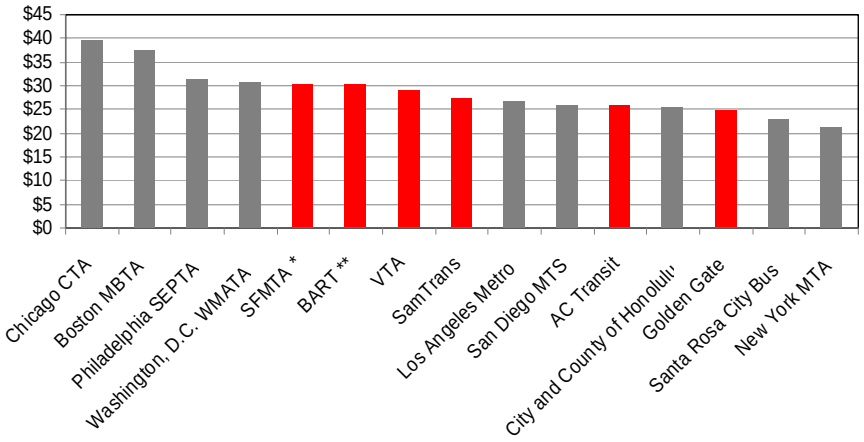
Source: National Transit Database, "Big 7" only. Includes ferry, cable car and paratransit.

Findings:

1. Base wages appear reasonable when compared to national peers and Bay Area wage indices.

Bay Area transit operators' base wage rates are higher than many peers, but actually prove comparable when adjusted for the cost of living in various regions. And while increases in the Bay Area operators' base wage rates were higher than inflation, they were lower than the overall regional wage index. Beyond the base wage, however, Bay Area transit agencies may be advised to focus cost containment efforts on other wage costs — such as overtime and premium pay.

Hourly Wage Rates Adjusted to Bay Area Cost of Living



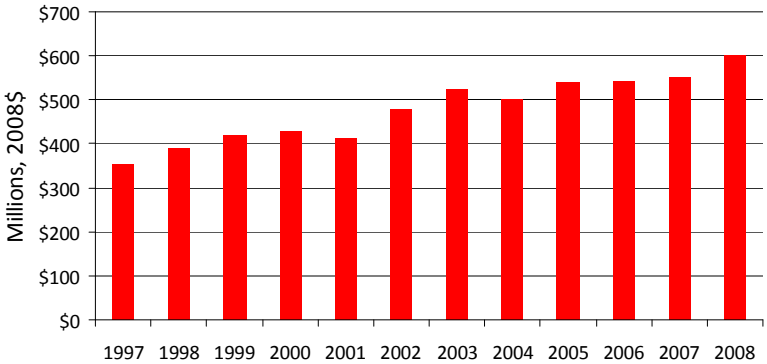
Source: "ACCRA Cost of Living Index, 2009 Annual Average Data," prepared by the Council for Community and Economic Research, as cited by Dash & Associates. Dash & Associates, Agency data

2. Fringe benefits are a major cost driver in both the short and long term.

Fringe benefits are a significant issue for the region's agencies — both in the short- and long-term — and represent major cost drivers. TSP recommends that Bay Area transit agencies consider healthcare and pension reforms among other cost containment strategies.

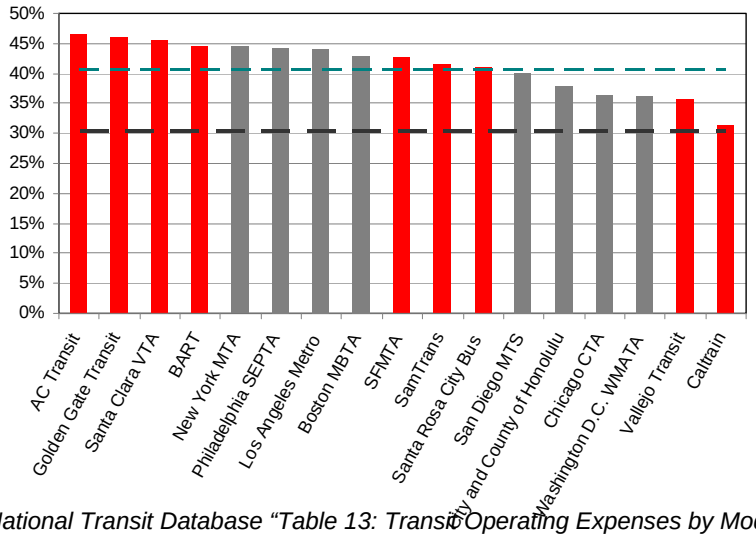
This issue is hardly unique to transit or even to the Bay Area. The growth in healthcare costs is a major cost driver across all employment sectors nationwide, and pension reform is a major issue throughout the public sector. But the growth in the cost of transit agencies' health and pension benefits is unsustainable, and already has created substantial unfunded liabilities. The charts below and on the next page illustrate an inflation-adjusted 69 percent increase in total fringe benefit costs for the Big 7 operators from 1997 to 2008. Though this rate of increase is consistent with national peers, it is higher than other economic sectors.

Total Fringe Costs for Big 7 Operators (1997 – 2008)



Source: National Transit Database - "Big 7" operators

2008 Employee Benefits Costs as Pecent of Total Compensation



Source: FY2008 National Transit Database "Table 13: Transit Operating Expenses by Mode, Type of Service and Object class."U.S. Department of Labor (Employers' National Average)

Finally, the chart below includes sample strategies implemented or considered by Bay Area agencies to control fringe benefit costs.

Sample Fringe Benefits Cost Control Strategies

Cost Control Strategy	Order of Magnitude Agency Annual Cost Savings
Health Insurance	
Medical insurance cap (BART labor agreement)	▪ Lowered retiree medical liability from $434m to $362m. ▪ Estimated on-going savings of $8m annually (as of 2013)
"Medical Coverage Opt-Out" initiative (BART labor agreement)	▪ $7m in savings over 4 years ($1.75m per year). ▪ Costing assumes another 244 employees/retirees opt out of medical coverage. Savings begin 1/1/2010.
Agency pays a capped % of health insurance costs for active employees (VTA proposal)	▪ Every 5% of costs shifted to employees yields $1.2m in savings
Insurance premium contribution cap for both active employees and retirees (SamTrans agreement)	▪ Reduced the District's overall exposure to OPEB liabilities by $6.5 million on an annual basis.
Agency limits its share of premium costs to Employee + 1 Dependent for active employees (VTA proposal)	▪ $6m in savings per year
Pension	
Create new pension tier for new hires (AC Transit proposal)	▪ $7m (only produces significant savings after 30-years)

Source: TSP Financial Task Summary Report: http://www.mtc.ca.gov/planning/tsp/Financial_Task_Summary_Report.pdf

3. Changes in work rules and business models provide opportunities for cost savings.

Work rules — determined by a history of Collective Bargaining Agreements and agency practices — govern the roles and responsibilities of transit management and employees. These rules have significant implications for how transit service is provided and for the cost to provide the service. Work rules are agency-specific, and many transit agencies have conducted assessments of potential savings that could result from specific changes.

TSP's analysis, which included testing certain changes to work rules and business model strategies (shown in the table below), shows that changes to work rules can yield major impacts on the cost of delivering service. Data on work rules regarding premium pay suggest further analysis could produce options for significantly lowering operating costs. A business model that relies more on part-time operators, reduction of absenteeism and the size of the extra-board, and consideration of more outsourcing of certain services also may yield significant savings.

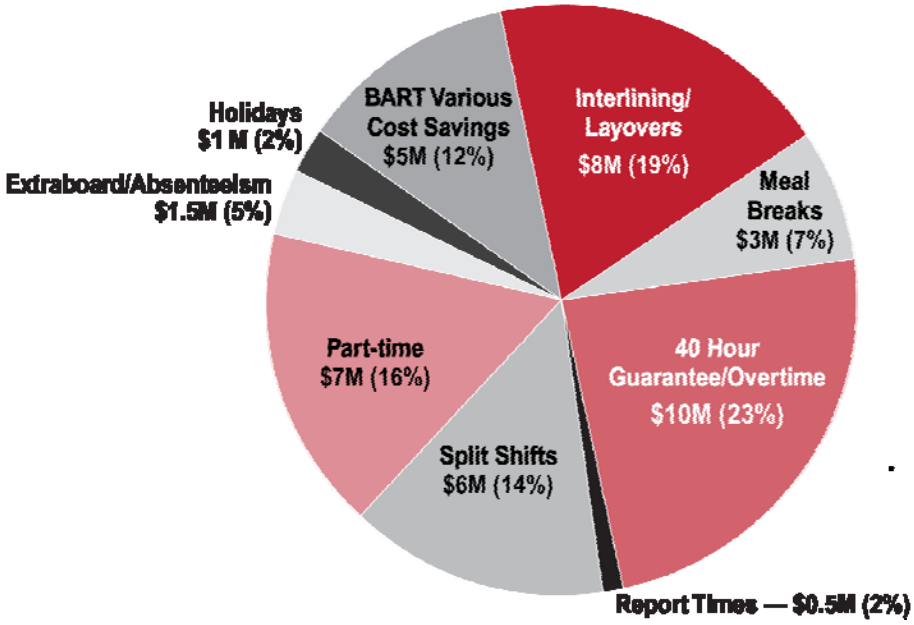
Sample Work Rule and Business Model Strategies

Work Rule Category	Sample Changes to Work Rules
Interlining/Layovers	Target 15% layovers
Guarantee/Overtime	Weekly guarantee/overtime (40 hours)
Report Times	10 minute sign on and 5 minute sign off
Meal Times	30 min. unpaid meal breaks as allowed in Wage Order 9
Split Shifts	Spread premium from 11th hour; Max 2 hour split break; No pyramiding
Part Time	Maximum 7.5 hours per day and up to 20% of full time roster assignments
Extraboard/Absenteeism	1-5% reduction in Extraboard staff
Holidays	One less holiday on full service day
Service Contracting	Contract operation of one division or service group

Source: Transportation Management and Design, Inc

As illustrated in the chart below, the TSP financial analysis' test of work rule and business model changes resulted in annual savings of some $42 million, or about 2 percent of the total annual Bay Area transit operating budget.

Annual Work Rule Cost Saving Estimates



Source: Transportation Management and Design, Inc

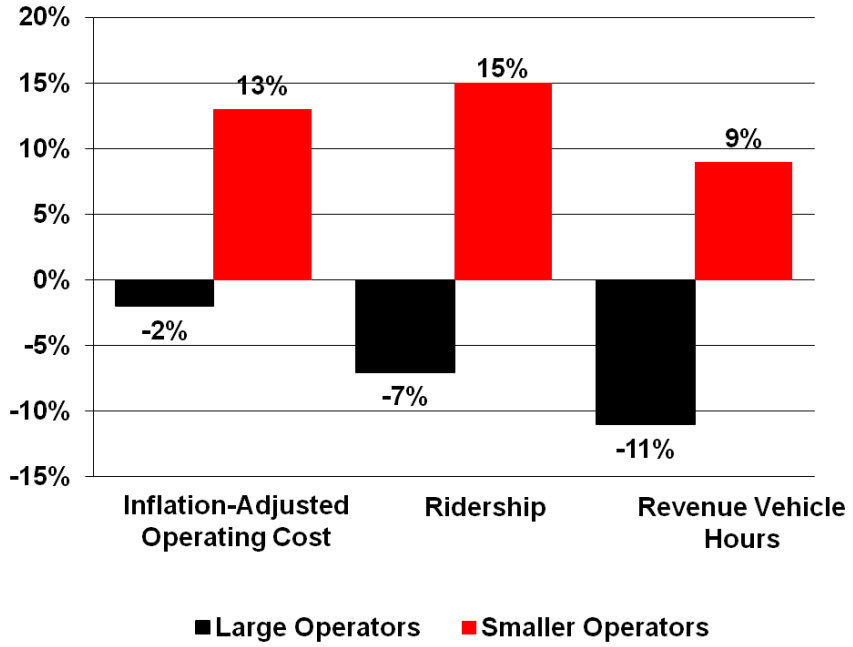
4. Paratransit cost structure performs better than national peers but faces increased cost pressure through future growth in demand

Compared to national peers, the Bay Area's costs for paratransit largely have been controlled. Yet opportunities remain for improving service, and for holding costs at or below inflation. As illustrated in the chart below, large operators' paratransit costs — as well as paratransit ridership and revenue vehicle hours — declined from 2005 to 2010 while costs, ridership and revenue vehicle hours for the region's small operators increased during this period, due in part to changing demographics and the smaller operators' less frequent fixed-route service.

Paratransit currently accounts for about 5 percent of the annual transit operating budget in the Bay Area. Demographic data reviewed as part of the TSP service analysis, however, suggests

the cost of paratransit — especially services required by the Americans with Disabilities Act (ADA) — could skyrocket in coming years because of the expected aging of the population and other factors. Projections from the Association of Bay Area Governments indicate the number of Bay Area residents age 65 and older will grow by 75 percent by 2030. This compares to an overall population increase of just 19 percent.

Bay Area Operators:
Percent Change in Paratransit Cost and Performance Indicators (2005 – 2010)



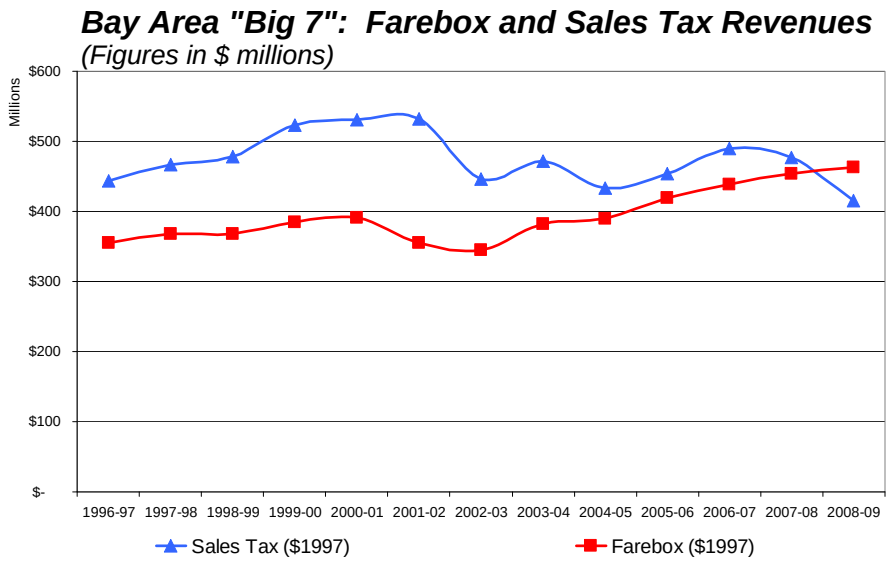
Source: Compiled by Nelson Nygaard Consulting from National Transit Database

TSP Paratransit Evaluation Process
To assess the sustainability of maintaining a quality ADA paratransit delivery system in the Bay Area, MTC evaluated paratransit as part of the TSP Service Analysis. The evaluation and recommendations were informed with technical expertise and rider input from:

1. Paratransit Technical Advisory Committee: comprised of transit agency staff
2. Paratransit Ad-Hoc Advisory Committee: comprised of staff from contractors that deliver or broker paratransit services in the Bay Area
3. Paratransit User Focus Group: roughly 30 paratransit riders from around the region

To address the TSP goals of improving financial conditions and service for the customers, 29 strategies were evaluated for this project that fall generally under the heading of demand management, productivity improvement, cost containment, restructuring service, and alternatives to ADA paratransit. These measures have the potential to manage the cost of ADA paratransit service while maintaining mobility for riders. Many operators have implemented at least some of these strategies, but there is still opportunity for more operators to implement many of the strategies.

5. Sales tax receipts, the biggest source of non-fare subsidy, have been flat over the past decade.
Local sales tax revenue represents about 20 percent of the annual transit operating budget for all Bay Area operators. This revenue has been highly unpredictable and actually is lower in real terms than it was in 1997, a trend that is forecast to continue for the foreseeable future. As shown in the chart below, farebox revenue is higher in real terms and subject to greater agency control.



Source: MTC Statistical Summaries

Summary

Several of the Bay Area's large transit operators, in recent labor contract agreements and budgeting, have identified and implemented cost control measures that result in both immediate annual savings and longer term improved financial sustainability. The TSP's financial findings suggest significant operating savings can be achieved each year by building off of these efforts. The financial findings — with potential annual regionwide savings levels — are summarized below.

Summary of Cost Containment Strategies Identified in TSP
Potential Savings of Roughly 10% of Annual Operating Budget

Area	Findings/Strategies Identified	Potential Savings
Fringe Benefits	•Findings: Fringe benefits have increased significantly; accounts for 34% of operating costs •Strategies: Two-tiered pension system, employee contributions, cap agency contribution to medical insurance, limit coverage options	$65 million
Work Rules and Business Model	•Findings: Premium pay data suggests further analysis could produce options for lowering operating costs •Strategies: 40 hour weekly guarantee, minimize unnecessary layovers, some part time drivers, contract a portion of operations	$80 million
Administrative Staff Costs (REVISED)	•Findings: Bay Area operators dedicate a higher percentage of operating budgets to administrative costs than peers; •Strategies: Reduce percentage of costs going to administration to be in-line with peers	*$45 million (REVISED)*

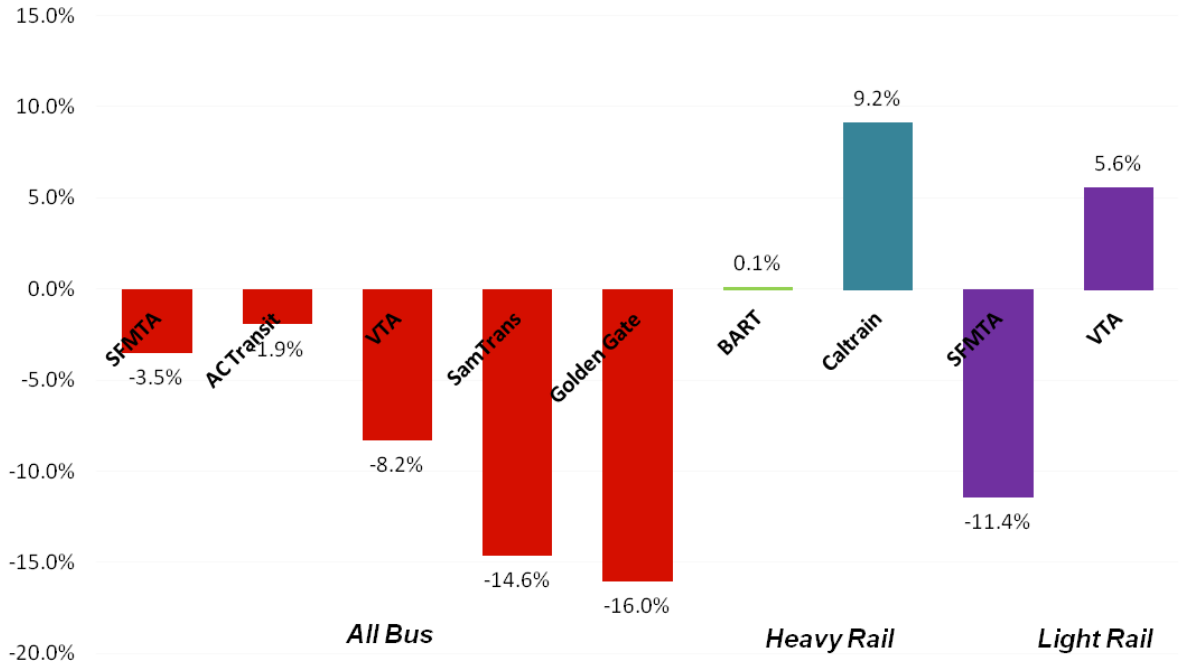
Source: TSP Financial Task Summary Report: http://www.mtc.ca.gov/planning/tsp/Financial_Task_Summary_Report.pdf and TSP PSC meeting materials: http://apps.mtc.ca.gov/meeting_packet_documents/agenda_1821/_02-13-2012_PSC_Full_Packet.pdf

Service
Background and Findings

Background:
Bay Area transit agencies in recent months have identified and implemented strategies to improve service for their riders. These efforts have focused on travel time savings, customer amenities, and improved connectivity. TSP service recommendations attempt to build on these improvements and to focus on connectivity between systems.

Findings:
6. Improving travel times on major corridors will provide significant gains in productivity.
Transit ridership and customer satisfaction will increase with reductions in transit travel times. Focusing travel-time reduction investments on high-ridership corridors will yield the highest returns in new riders and travel time savings. Currently, 53 percent of the Bay Area's transit ridership is on corridors with an average speed of just nine miles per hour. As shown in the chart below, average speeds on most Bay Area transit systems decreased from 1997 to 2008. The only exceptions are BART, Caltrain and VTA light rail, all of which experienced modest gains.

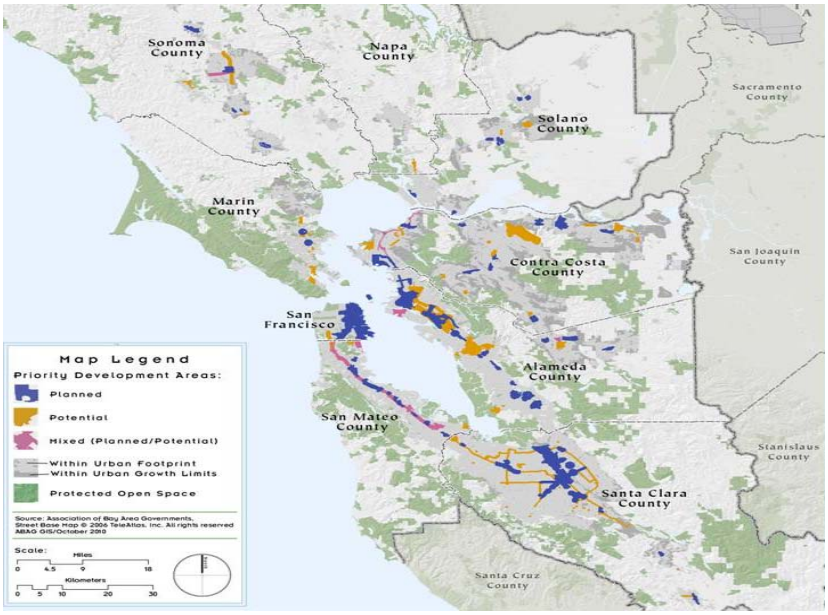
Change in Average Speed (1997-2008)



Source: Compiled by Transportation Management and Design, Inc from transit operator data

7. Integrated land-use/transportation planning will attract new transit riders.
Transit ridership is highest in cities and on corridors with a mix of housing, jobs and services. Reinvestment in existing high-ridership transit corridors, complemented with focused housing and job growth in these corridors, will attract new riders to the system. Plan BayArea seeks to focus growth around existing high-frequency transit, as illustrated in the map below. Approximately 70 percent of the region's projected housing and employment growth from 2015 to 2040 will be located in Priority Development Areas.

Priority Development Areas



Source: ABAG

8. A consistent fare structure can boost transit ridership and improve the customer experience.

Fare policy reform offers opportunity to increase overall ridership and improve existing customer experience. As illustrated in the charts below, riders transferring between systems account for about 10 percent of the region's roughly 1.5 million daily transit trips. Additionally, transfer policies and fares are neither consistent nor user-friendly and could be revised to better serve this significant transfer market.

Inter-Operator Transfers and Transfer Rates, Average Weekday

	Total Transfers To/From	Total Ridership	Transfer Rate
AC Transit	12,717	190,647	6.7%
BART	77,837	338,842	23.0%
Caltrain	12,765	36,695	34.8%
Golden Gate Ferry	468	6,618	7.1%
Golden Gate Transit	878	20,531	4.3%
SamTrans	3,100	45,909	6.8%
San Francisco Muni	73,821	706,208	10.5%
Santa Clara VTA	2,254	130,670	1.7%
Total	**183,840**	**1,476,121**	**12.5%**

Source: May 2011 Clipper inter-operator travel Matrix; CH2M Hill estimates

Fare Policies and Penalties for Transferring Riders

Operator Pair	Monthly Transfers	Single Trip Transfer Agreement	Pass Transfer Agreement
BART / SFMTA	1,556,200	$0.25 discount on SFMTA, each way	"A" Fast Pass ($10 more/month to ride BART within SF; and BART Plus (savings ~$6-$10/month)
AC Transit / BART	269,300	$0.25 discount on AC Transit, each way	None
Caltrain/ SFMTA	218,500	None	$5 discount on SFMTA pass
BART / Caltrain	72,300	None	None
AC Transit / SFMTA	40,900	None	None
BART / SamTrans	30,100	None	BART Plus (savings ~$8-$12/month)
SamTrans / VTA	27,900	Free transfer on 2nd leg, each way	Monthly pass reciprocity

Source: Information compiled from transit operators

Institutional
Background and Findings

Background:
The Bay Area transit network is characterized by multiple layers of decision-making and service delivery — 28 separate transit agencies, each with its own board, staff and operating team. This institutional structure can complicate efforts to deliver a regional system that passengers can understand and effectively navigate, as well as one that can keep pace with changes in demand.

That said, the objective of the TSP was not to evaluate wholesale changes to the structure of the Bay Area transit system. The project focused instead on specific financial and customer challenges — such as resource allocations, joint planning and project development, and fare and customer service policies — that may result from the current institutional structure, and identified other models (from around the nation or internationally) that could address these challenges.

Among the findings is that the Bay Area pays higher administrative costs (per transit rider or per hour of transit service) than its peers. Based on this finding, the TSP looked to models nationally to identify functional areas that may be appropriate for consolidation or enhanced coordination to better optimize resources and reduce costs.

Findings:
9. Integrated transportation policy decision-making — both geographic and modal — can lead to more effective investment and service decisions.
Several Bay Area counties have consolidated transportation policy decision making into one board or authority, allowing for multimodal policy planning and project delivery.

10. Bay Area transit administrative costs are higher than national peers, owing in part to the existence of multiple operators serving the region.
Analysis of administrative costs and number of administrative employees against various cost and service metrics shows Bay Area operators dedicate a higher percentage of their operating budgets to administrative costs than do their peers. The Bay Area's average $37.84 per hour administrative cost is 30 percent higher than the $29.39 per hour average for the peer group. Similarly, Bay Area administrative costs average $0.95 per rider compared to $0.53 for peers.

Region	Number of Agencies	Total Regional Transit Budget	Total Regional Administrative Costs	Regional Vehicle Revenue Hours	Regional Admin. Cost per Vehicle Revenue Hour	Regional Transit Ridership	Regional Admin. Cost per Rider
Bay Area	**27**	**$2.2 billion**	**$461 million**	**12.1 million**	**$ 37.84**	**484 million**	**$ 0.95**
New York City	37	$11.5 billion	$1,998 million	58.3 million	$ 34.27	4,077 million	$ 0.49
Philadelphia	5	$1.2 billion	$208 million	7.1 million	$ 29.14	358 million	$ 0.58
Seattle	9	$1.1 billion	$195 million	6.8 million	$ 28.93	189 million	$ 1.03
Los Angeles	20	$2.2 billion	$408 million	16.7 million	$ 24.48	640 million	$ 0.64
Chicago	15	$2.1 billion	$363 million	14.9 million	$ 24.25	628 million	$ 0.58
Washington DC	12	$1.7 billion	$254 million	11.0 million	$ 23.18	476 million	$ 0.53
Boston	7	$1.2 billion	$155 million	7.1 million	$ 21.96	363 million	$ 0.43
Peer Average	**15**	**$3.1 billion**	**$512 million**	**17.4 million**	**$ 29.39**	**962 million**	**$ 0.53**

Source: Compiled by PB Americas from NTD and operator data